

## **DELTA-SIGMA DIGITAL-TO-ANALOG CONVERTER ASSEMBLY**

### **ABSTRACT**

Systems and methods are provided for converting a digital signal into an analog signal. A digital-to-analog converter assembly comprises a delta-sigma modulator, a digital-to-analog converter, an analog filter, and a comb filter. The delta-sigma modulator processes a digital input signal to produce a digital output signal having at least one associated high dynamic range frequency band. The digital-to-analog converter converts the digital output signal into an analog output signal having at least one associated high dynamic range frequency band. The associated high dynamic range bands have respective frequency characteristics. An analog filter assembly filters the analog signal. The analog filter has at least one passband. A comb filter assembly attenuates the analog signal output of the filter assembly to improve signal to noise ratio.